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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/914,874	09/05/2001	Johann Michael Kochler	F-7129	6041
28107	7590	04-20/2005	EXAMINER	
JORDAN AND HAMBURG LLP 122 EAST 42ND STREET SUITE 4000 NEW YORK, NY 10168			NAGPAUL JYOTI	
			ART UNIT	PAPER NUMBER
			1743	

DATE MAILED: 04/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/914,874

Applicant(s)

KOEHLER, JOHANN MICHAEL

Examiner

Jyoti Nagpaul

Art Unit

1743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. **Claims 1-15** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 1, lines 4 and 5, the recitations of "at least on" and "the opposite" do not agree. Applicant has recited that the channel can be both the first and second substrates (at least one implies that both is a possibility) and that the passage openings are in the opposite substrate. If the channel is in both substrates, there is no opposite substrate.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. **Claims 1-15** are rejected under 35 U.S.C. 103(a) as being unpatentable over Demers (US 6117396) in view of Ohman (US 5962081).

Demer discloses a liquid dispensing device. The device comprises a first and second substrate (Unlabeled, See Figure 5) wafer being engaged to one another in a common plane. The device further comprises at least one longitudinally extending channel (212) is inserted into at least one of substrate wafers. The channel (212), in a preselectable section of its length, is captured by two passage openings/ metering capillaries (214). The passage openings/metering capillaries (214) include capillary barriers/membranes that are formed in the metering capillaries/passage openings. (Col.4, Lines 19-21) The barriers/membranes have transmission areas, which are dimensioned so that they preselectably prevent premature ejection of the liquid from the metering capillaries. According to Figure 5, the channel is provided with at least two further openings (213) being adapted to enable loading and/or displace of the liquid, provided above the section captured by the preselectable channel section, by applying a fluidic pressure/pump (Col. 4, Lines 24-26). Demer further discloses the substrates may be made up of different combinations of material such as the first substrate wafer is made up of glass and the second substrate wafer is made up of silicon where they are anodically bonded together. (Col. 11, Lines 33-34 and Col. 11, Lines 41-42) Demer further recites "materials to fabricate the liquid dispensing device can be chosen from a group of resistant to the chemicals for distribution and assaying. A preferred material amenable to micro-fabrication, etching and replication..." (See Col. 9, Lines 62-67) Demer discloses various different embodiments of the device. According to Figure 3A, the passage openings (214) are connected to a second channel (112) in the second substrate wafer.

Demer fails to disclose means for temporarily closing at least on the passage openings and one of the further openings. Demer also fails to disclose the second substrate wafer opposing to the first substrate wafer is entirely covered by membrane where the membrane is perforated polymeric foil. Demer fails to disclose that the first and the second substrate wafers are attached to one another by externally provided clamping means. Demer further fails to disclose each passage openings having a frusto-pyramadial section.

Ohman discloses a substrate body with a valve seat (30) for opening and closing the fluid flow of a passage opening. (See Figure 5A) Ohman also discloses a substrate wafer being entirely covered by a membrane (32). The device further includes passage openings having a frusto-pyramadial section. (See Figure 5A)

It would have been obvious to one of the ordinary skill in this art at the time of the invention by applicant to provide a membrane that entirely covers the second substrate, a valve seat and passage openings having frusto-pyramadial section in order to temporarily closing the one of the passage openings in order to redirect flow of the liquid and thus permitting to selectively transport the mobile phase/or stationary phase as a suspension.

Response to Arguments

1. Applicant's arguments filed on February 1, 2005, with respect to the rejection(s) of claim(s) 1-16 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Demers (US 6117396) in view of Ohman (US 5962081).


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jyoti Nagpaul whose telephone number is 571-272-1273. The examiner can normally be reached on Monday thru Friday (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JN


Jill Warden
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